

CLAIMS

1. An implant element for permanent anchorage in bone tissue in which at least the surface intended to face the
5 tissue in the implantation region is made of titanium with a titanium oxide surface characterized in that the implant surface is modified by anodization to acquire an oxide thickness of approximately 10-200 nm, an increased surface oxide crystallinity and roughness on the submicrometer
10 scale in order to provide a high degree of bone-to-implant contact.
2. An implant element according to claim 1 characterized in that the degree of surface oxide crystallinity is increased compared to a machined titanium
15 surface.
3. An implant element according to claim 1 characterized in that the anodized surface is a heterogeneous surface with irregularly distributed smooth and rough areas.
- 20 4. An implant element according to claim 3 characterized in that the rough areas are 10-100 μm large.
5. An implant element according to claim 3 characterized in that the rough areas of the surface have a roughness in the range of 10 nm to a few μm .
- 25 6. An implant element according to claim 3 characterized in that the ratio between the smooth and rough areas are larger than 1 and preferably about 3.